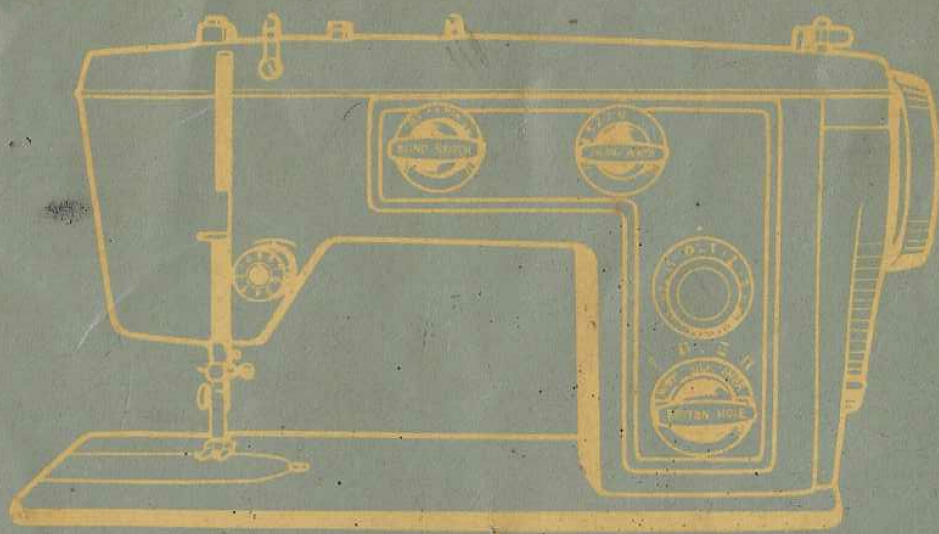


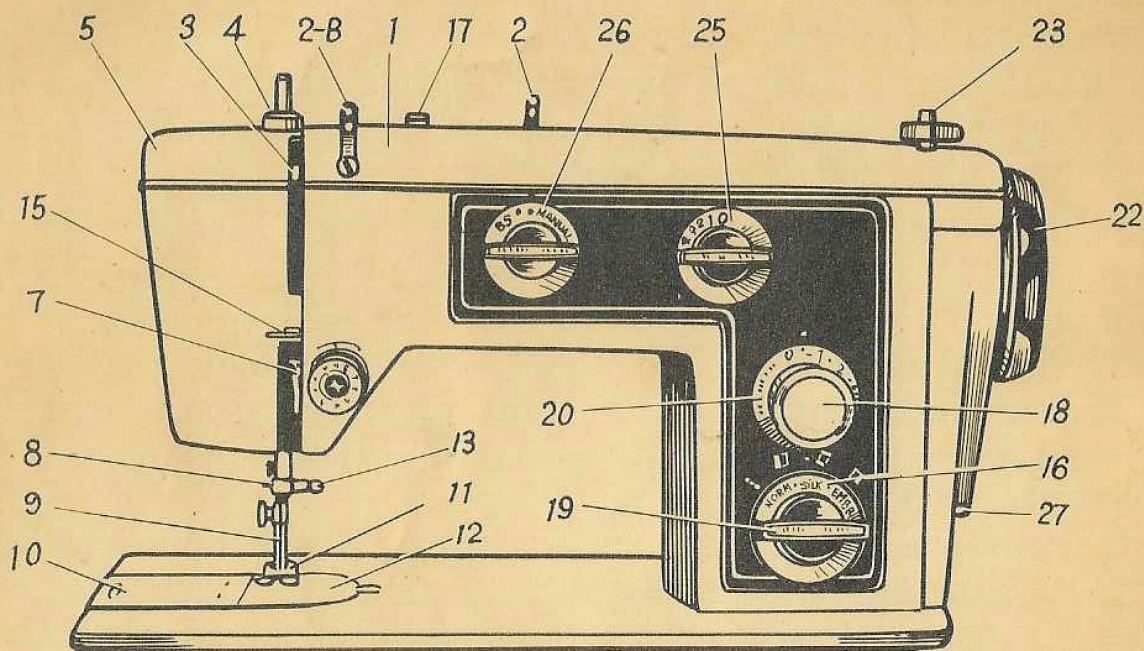
OWNER'S MANUAL



DELUXE
AUTOMATIC ZIG ZAG

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NAME OF EACH PART

- | | |
|----------------------------|--------------------------------|
| 1. Arm Cover | 15. Dial Tension Assembly |
| 2. Thread Guide | 16. Dialmatic Drop Feed |
| 2-B. Thread Guide B | 17. Bobbin Winder Thread Guide |
| 3. Thread Take Up Lever | 18. Reverse Stitch Push Button |
| 4. Patch-O-Matic Darner | 19. Button Hole Dial |
| 5. Face Plate | 20. Stitch Regulator Dial |
| 6. Thread Guide | 22. Hand Wheel |
| 7. Thread Retainer Bar | 23. Automatic Bobbin Winder |
| 8. Needle Bar Thread Guide | 25. Zig Zag Width Control Dial |
| 9. Needle | 26. Pattern Selector Dial |
| 10. Throat Plate | 27. Sewlight switch |
| 11. Presser Foot | |
| 12. Needle Plate | |
| 13. Needle Clamp | |

SELECTING NEEDLE AND THREAD

Sizes and Grades of Needle	Type of Fabric and Work to be Done	Size of Thread		
		Cotton	Silk	Linen
9 (Fine)	Delicate fabrics like georgette, chiffon, batiste, fine lace, linen and other sheer fabrics. For fine lingerie, infants' clothes and fine lace work.	100 to 150	00 and 000 Twist	
11 (Medium-Fine)	Medium light-weight and summer-time fabrics, for house dresses, washable cotton dresses, aprons, curtains, children's dresses.	80 to 150	0 Twist	
14 (Medium)	Dress silks and cottons, light weight woolens, draperies, fabric furnishings. For general household sewing, men's fine shirts, smocks and fabric decoration.	60 to 80	A and B Twist	
16 (Light-Heavy)	Heavy cretonne, madras, muslin, brocades, and quilts. For men's work shirts, and fabric furnishings.	40 to 50	C Twist	
18 (Medium-Heavy)	Heavy woven coating, light weight canvas, bed ticking, upholstery and awning material, slip covers.	30 to 40	D Twist	
19 (Heavy)	Heavy woven suiting, coating, duck ticking, drilling, canvas ticking.	24 to 30	E Twist	60 to 80
21 (Extra-Heavy)	For bags, canvas, coarse clothes and heavy goods.	Very Coarse		40 to 60

BASIC INFORMATION

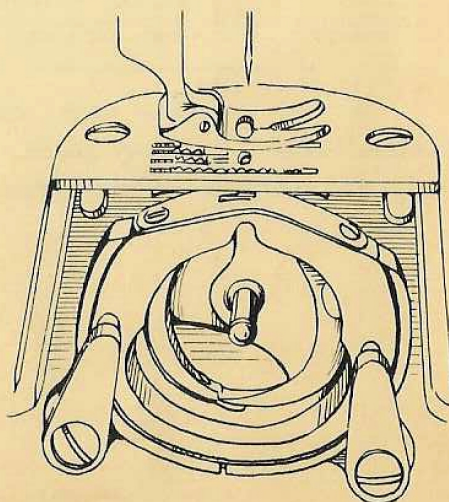
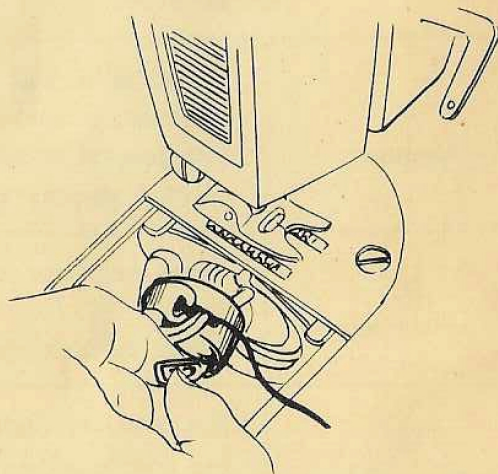
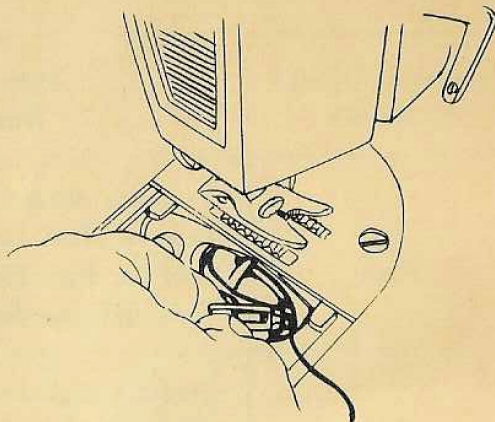
1. REMOVING THE BOBBIN AND THE BOBBIN-CASE.

a) Slide the Throat-Plate (10) to the left.

b) Move the Needle to its highest point by turning the Hand-Wheel toward you.

c) Lift the latch of Bobbin-Case with your left hand and remove the Bobbin-Case by pulling it toward the left and out of the machine.

d) The Bobbin will drop out when the open end of the Bobbin-Case is held downward and the latch is permitted to snap back into place.



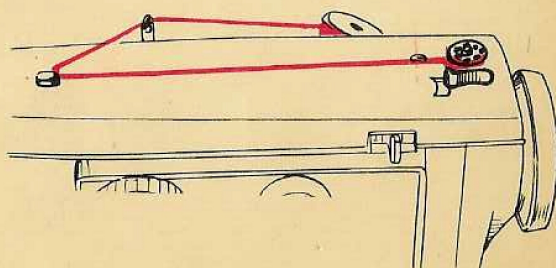
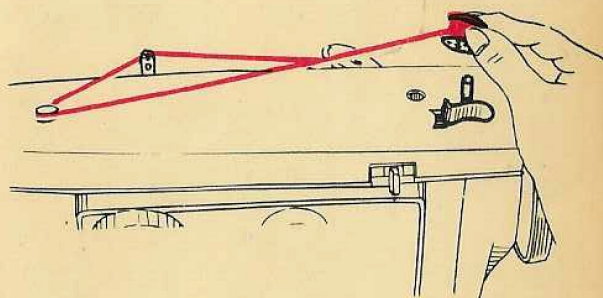
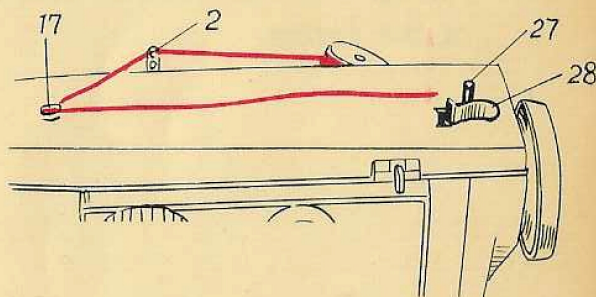
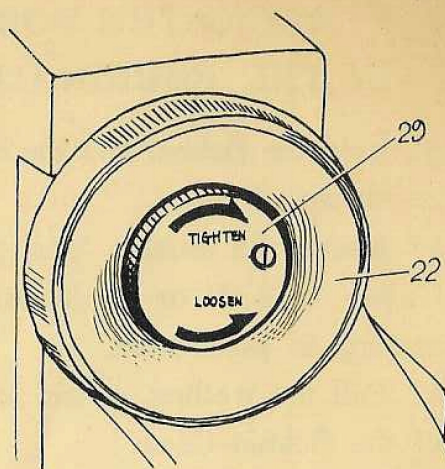
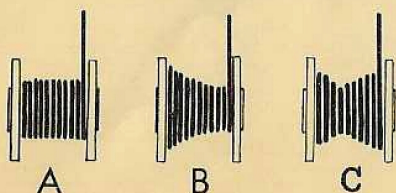
2. WINDING THE BOBBIN

- a) Hold the Hand-Wheel (22) with left hand, and disconnect the Hand-Wheel from sewing mechanism by turning the Stop-Motion-Knob (29) toward you with right hand.
- b) Place a spool of thread on the Spool-Pin.
- c) Pass the thread through Thread Guide (2) and the Tension Disc of the Bobbin-Winder-Thread-Guide (17).
- d) Wind end of thread by hand around an empty bobbin seven or eight turns.
- e) Then set the Bobbin on Bobbin-Winder-Shaft (27). Be sure the notch in Bobbin fits over small pin on Shaft.
- f) Press Bobbin-Winder-Latch (28).
- g) Run the machine until the Bobbin stops winding thread automatically.
- h) Break off thread and remove the Bobbin from the shaft.
- i) Holding the Hand-Wheel firmly with your left hand tighten the Stop-Motion-Knob (29) with your right hand, by turning the Knob away from you.

NOTE

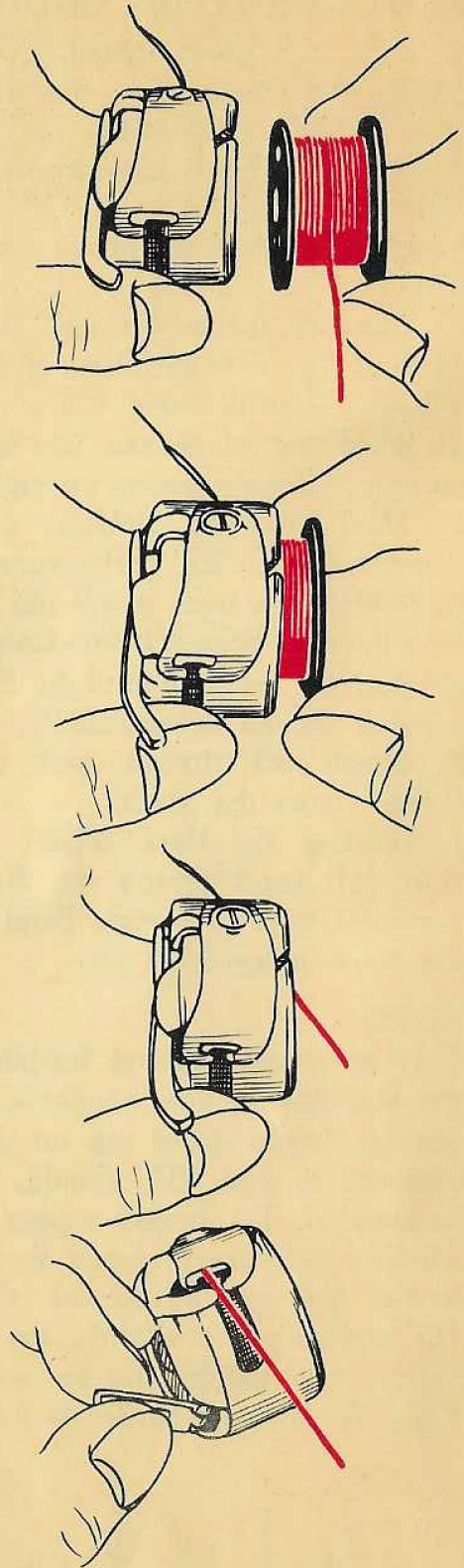
Only an evenly wound bobbin will allow the machine to sew properly. The bobbin having thread piled up on one side as pictured in Fig. 'B', should, therefore, be avoided. To correct a poor and uneven winding such as pictured in Fig. 'B', loosen the set screw of thread guide (17) and move it slightly to the left or right, then tighten the set screw.

Fig. 'A' shows a perfectly wound bobbin.



3. PLACING THE BOBBIN IN THE BOBBIN-CASE.

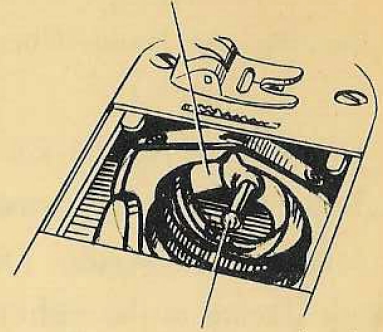
- a) Hold the Bobbin and the Bobbin-Case as shown.
- b) Insert the Bobbin into the Bobbin-Case, with 5 or 6 inches of thread trailing in your palm.
- c) Pull the trailing thread into the slot of the Bobbin-Case.
- d) Then draw thread under the Tension Spring between the fork shaped opening of the spring.



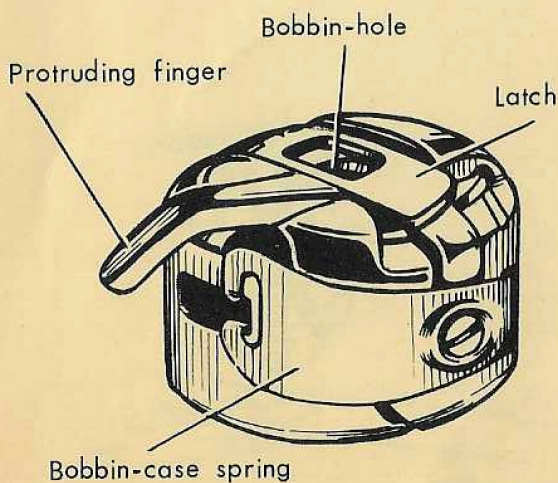
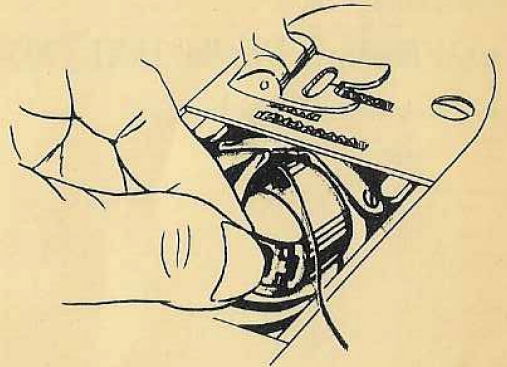
4. PLACING THE BOBBIN-CASE INTO THE SHUTTLE.

- a) Move the Needle to its highest point, by turning the Hand-Wheel (22) toward you.
- b) Slide the Throat Plate (10) to the left.
- c) Hold the Bobbin-Case-Latch between thumb and forefinger of your left hand.
- d) Place the Bobbin-Case into center post of shuttle, with protruding finger fitting into slot.
- e) Release latch and press Bobbin-Case into the Shuttle until it clicks in.
- f) Allow 4 or 5 inches of thread to hang freely from Bobbin.

The slot of shuttle

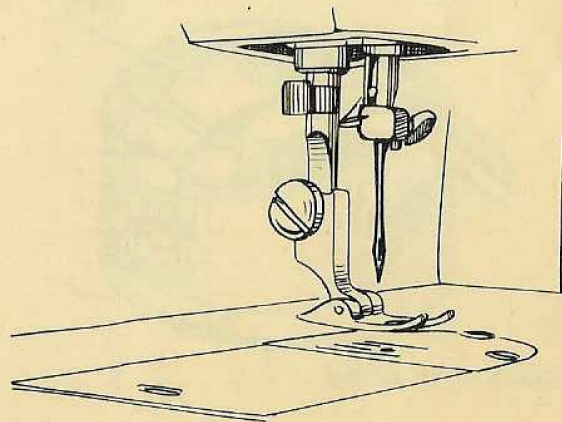
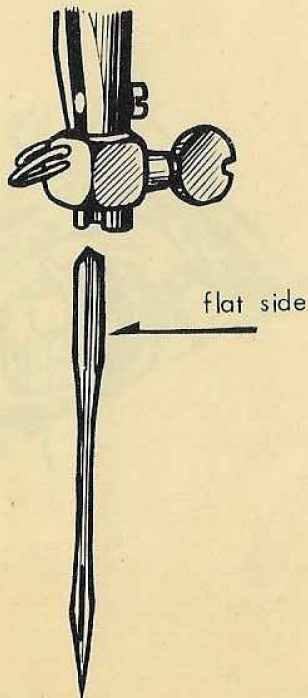
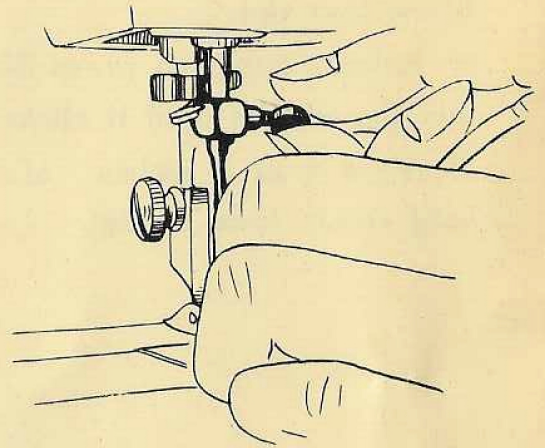
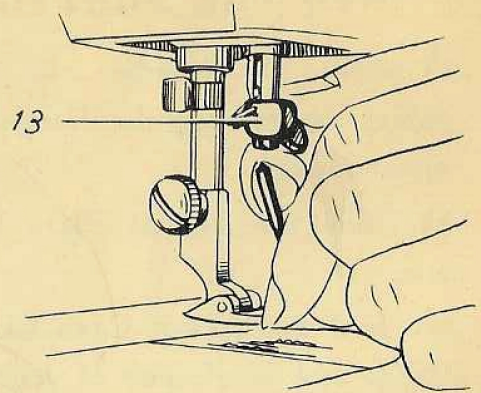


Center post of shuttle



5. INSERTING NEW NEEDLE.

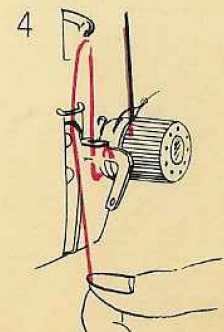
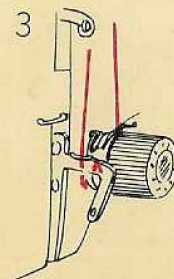
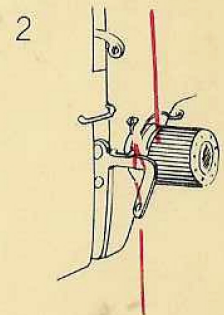
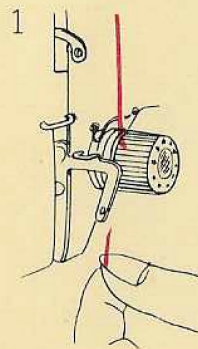
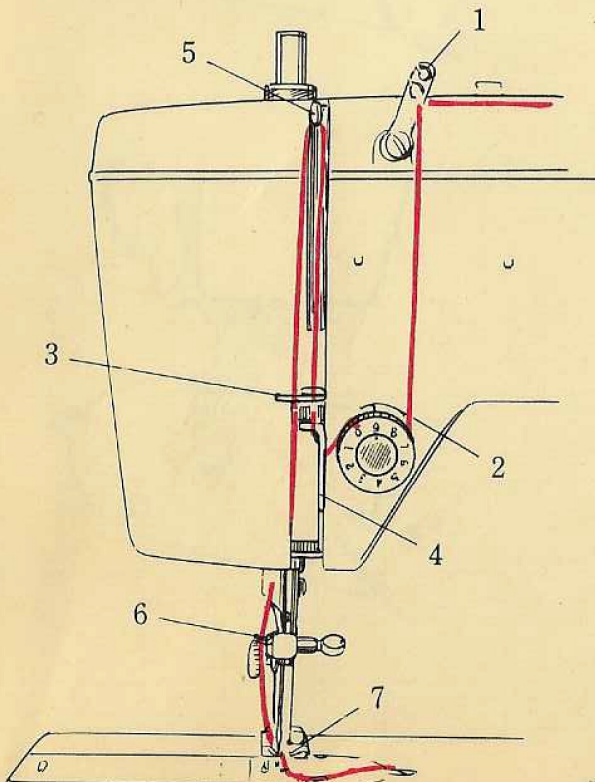
- a) Move the Needle to its highest point by turning the Hand-Wheel (22) toward you.
- b) Loosen the Needle-Clamp-Screw (13) slightly, and remove present needle.
- c) Insert New Needle (flat side of the Needle facing to the right) into the Needle Clamp as far up as it will go.
- d) Then tighten the Needle-Clamp-Screw securely.
- e) Standard Needle 15X1 (705) is to be used on this machine.



6. UPPER THREADING

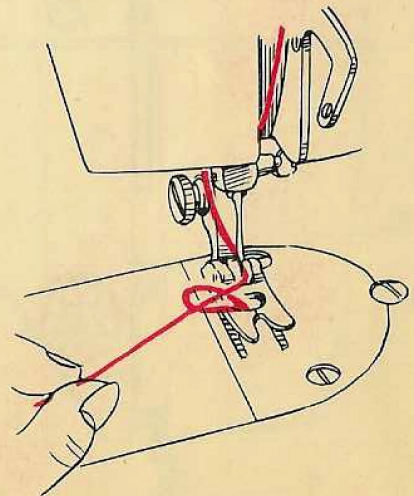
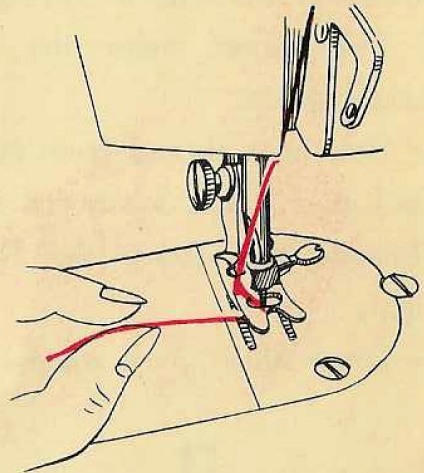
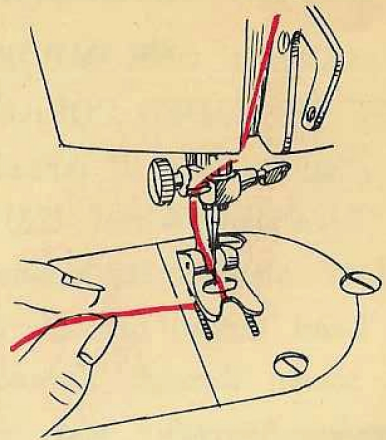
REMEMBER ONE IMPORTANT FACT=====IF THE MACHINE IS NOT THREADED CORRECTLY, IT WILL NOT SEW PROPERLY.

- a) Place a spool of thread on the Spool Pin.
- b) Turn Hand-Wheel (22) toward you until the Thread-Take-Up-Lever (3) is raised to its highest point.
- c) Lead thread through the threading points in numerical sequence as shown through Thread Guides, then downward to the Thread-Tension-Assembly and right to left between the two Tension discs (through the groove of tension assembly). Then pull upward and hook thread to the Check Spring from right to left.
- d) Pull thread under the Thread-Retainer-Bar and upward through thread guide.
- e) Now pass thread from right to left through the eye of Thread-Take Up-Lever, and downward through the Thread Guide and Needle-Clamp-Thread-Guide above the Needle. Then thread Needle from left to right.
- f) Draw about 3—4 inches of thread past the eye of Needle.



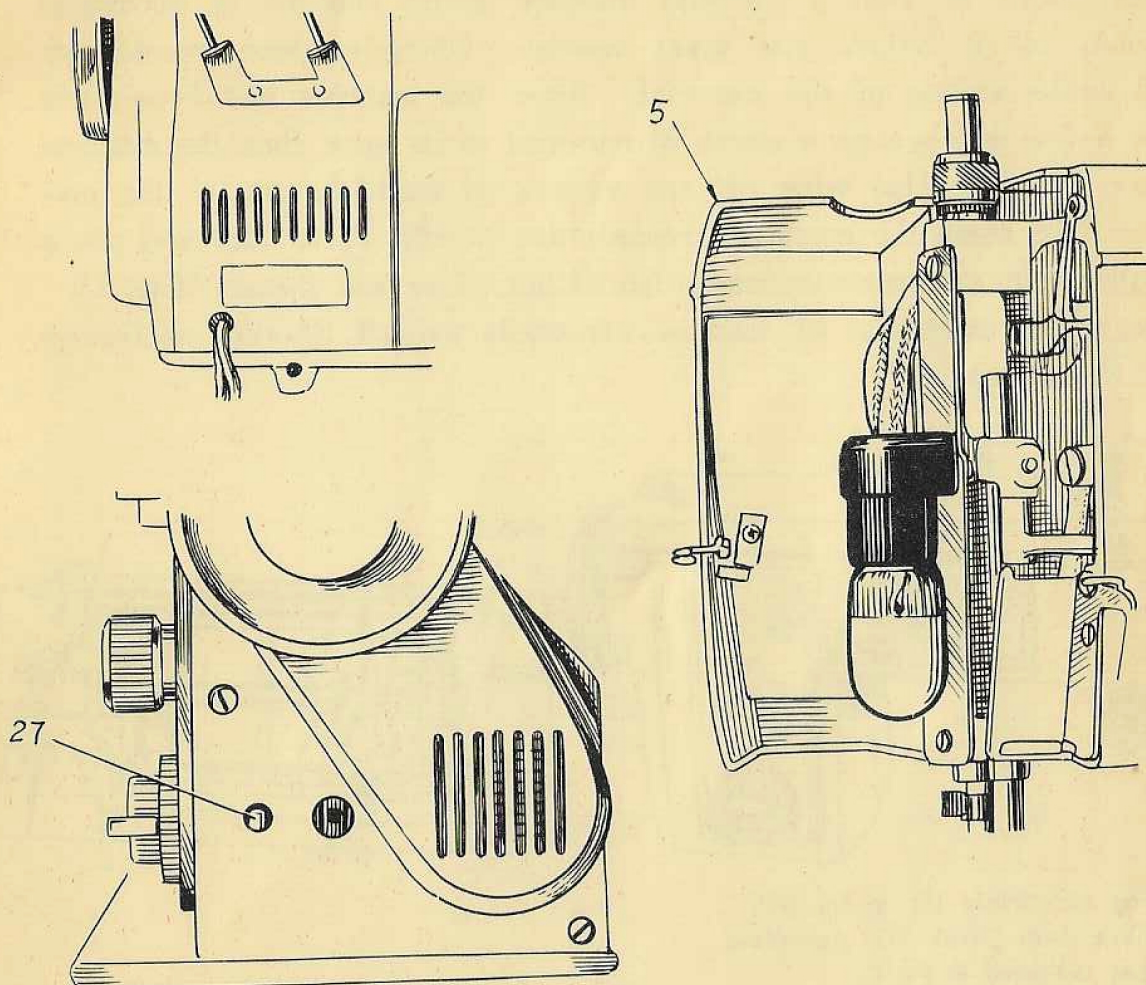
7. DRAWING UP THE LOWER THREAD.

- a) Hold the end of upper thread loosely with your left hand, so that thread remains slack.
- b) Turn Hand-Wheel (22) slowly toward you until Needle goes down and comes up again to its highest position. In so doing, the upper thread (needle thread) will catch the lower thread (bobbin thread).
- c) Then pull up needle thread, and at the same time the lower thread will be pulled up through stitch hole in Needle Plate.
- d) Both ends of thread must be drawn under and to the rear of Presser-Foot (11).



8. ELECTRICAL EQUIPMENT

- a. The machine motor is 110 Volts A. C. Current 50 Cycles.
- b. Plug extension cord into your wall outlet.



c. Lighting

Push the Sewlight Switch (27) to switch on or off.

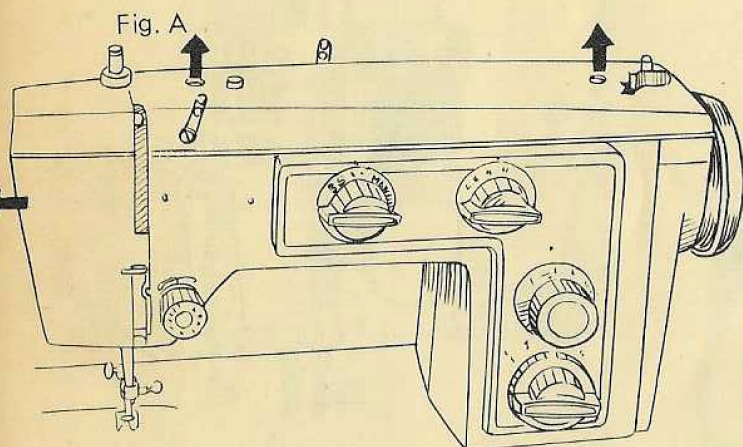
d. Changing the Light Bulb.

Swing the Face Plate (5) to the left.

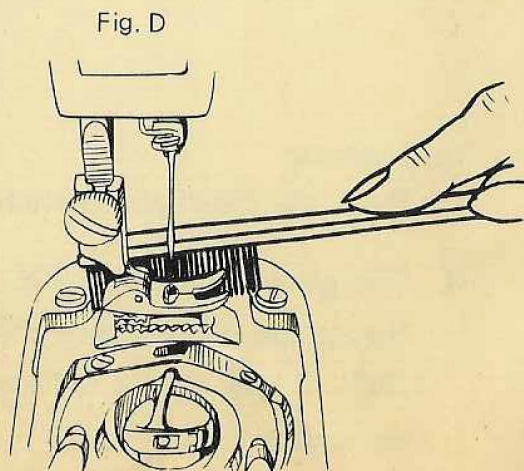
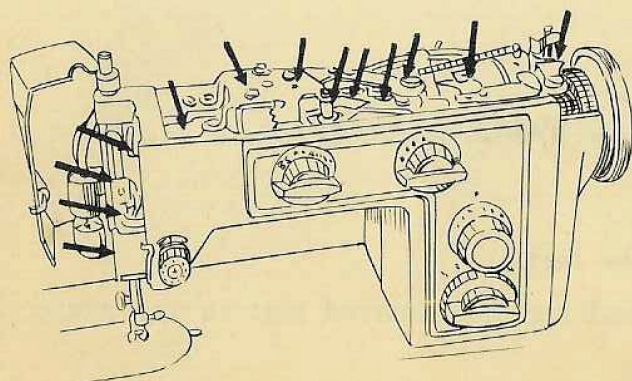
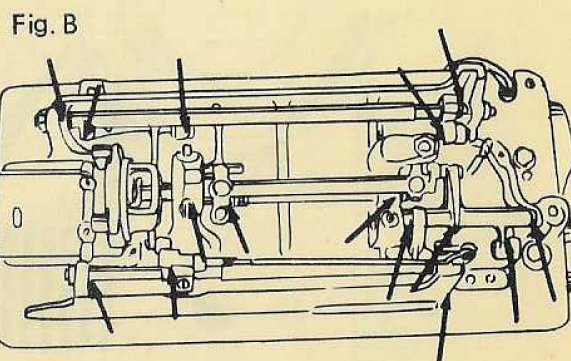
Bulb is now easily accessible and can be removed just as you would on ordinary light bulb.

9. OILING AND CLEANING

The Machine will always work best if properly oiled and cleaned at regular intervals. The illustrations in Figs. "B" and "C" indicate those places on machine which require one or two drops of a good grade of sewing machine oil once every working day or after about eight hours of use. Should machine stand idle for a prolonged period, oil it before you start sewing. Oiling machine excessively will cause soiling of the material. After the machine has been oiled, sew a few stitches on a scrap of material to be sure that the machine sews cleanly. Also wipe off any excess oil from the top of the machine. To clean the machine, remove the Needle-Plate (12) and use a small brush to remove accumulation of lint, fuzz and thread. (Fig. D) Also clean underside of machine, especially around Shuttle mechanism and Feed-Dog.



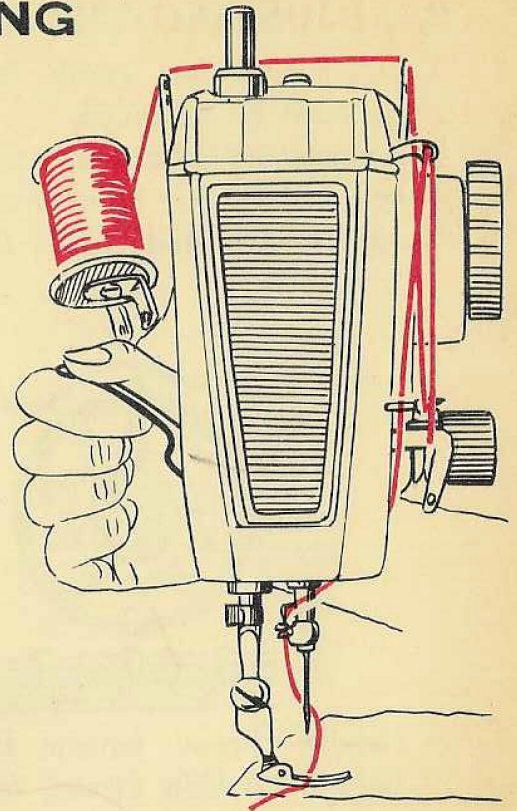
Swing Face Plate (5) to the left.
Remove Arm Cover (1). Lubricate
places indicated in Fig.C.



ACTUAL SEWING

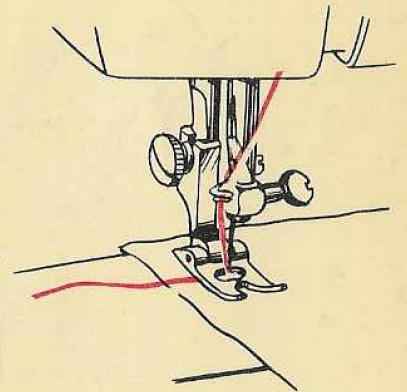
1. STARTING TO SEW

- a) Place fabric between Presser-Foot (11) and Needle-Plate (12).
- b) Lower needle into fabric and lower Presser-Foot.
- c) Hold the end of both threads for about three or four stitches, to prevent the threads from tangling, or clogging shuttle.
- d) Start machine, do not pull fabric but let the machine feed by itself.



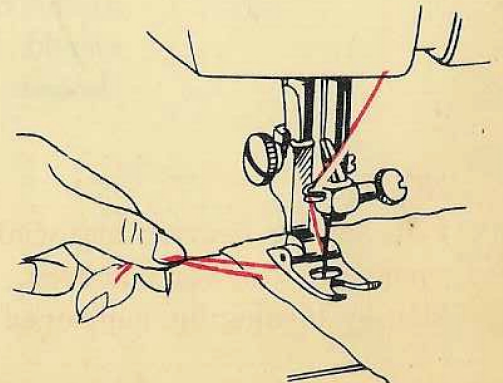
2. HOW TO TURN A CORNER

- a) Stop machine while needle is still in fabric.
- b) Raise Presser-Foot and turn fabric using the Needle as a pivot.
- c) Lower Presser-Foot and resume stitching.



3. REMOVING THE MATERIAL

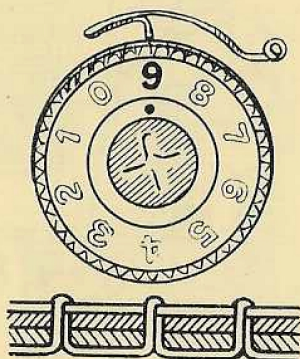
- a) Stop the machine.
- b) Turn the Hand-Wheel (22) toward you until Needle is at its highest position.
- c) Raise Presser Foot.
- d) Draw fabric directly back from the Needle (away from you).
- e) Pull out about 4 or 5 inches and snip thread close to fabric.



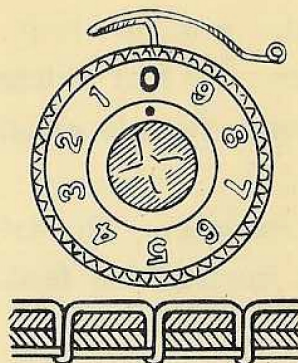
2. ADJUSTING THE THREAD TENSION.

To form a perfect stitch, both (needle thread and bobbin thread) tensions must be balanced.

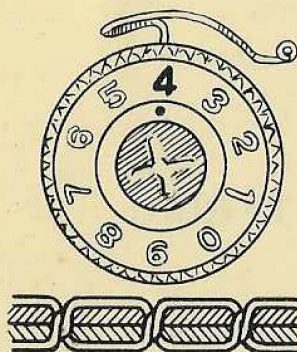
The numbered calibrated scale of the Upper-Thread-Tension-Assembly(15), makes a very fine adjustment of the thread tension possible. "0" is the loosest tension and "9" is the tightest tension.



Needle thread tension is too tight or bobbin thread tension is too loose.



Needle thread tension is too loose or bobbin thread tension is too tight.



For normal sewing the tension of the needle and bobbin threads should be equal to lock both threads in the center of fabric.

NOTE:

For sewing heavier materials with heavier threads, loosen the tension by turning it to lower numbers. For fine fabrics and fine threads, tighten tension by turning the numbered calibrated scale to higher for general sewing.

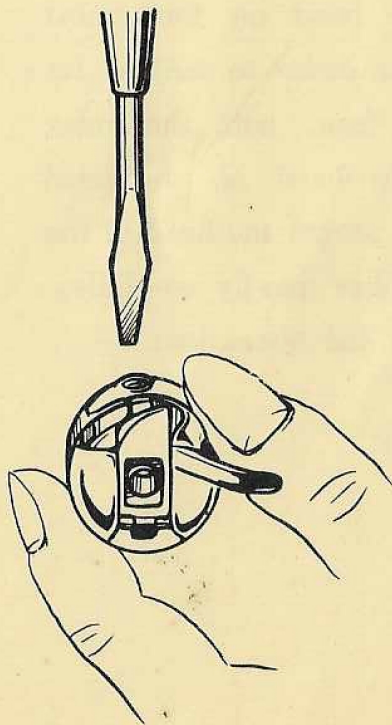
The lower (bobbin) thread tension should not be changed unless absolutely necessary, as this adjustment is very delicate.

Should it be necessary to adjust the lower tension, remove Bobbin-Case from the machine. Turn small screw in Bobbin-Case tension spring to the right to tighten tension; to the left to loosen.

Here is a simple test to help you determine the proper bobbin tension for normal stitching:

Lift the filled Bobbin in the Bobbin-Case by the thread hanging from it.

The tension should be just tight enough to hold its weight.



NOTE:

Do not turn screw in either direction more than about ONE QUARTER TURN at a time.

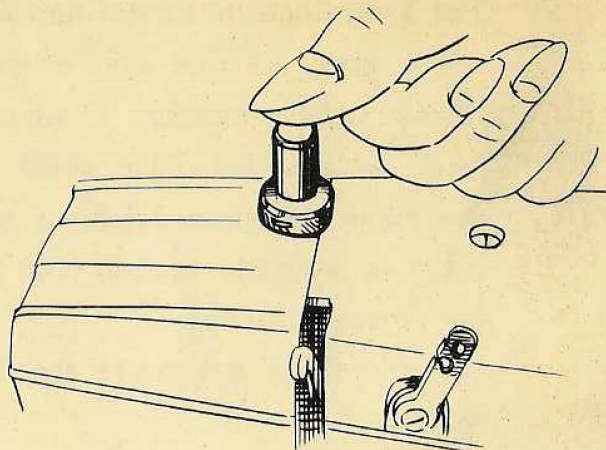
Then sew and check results.

3. ADJUSTING THE PRESSURE.

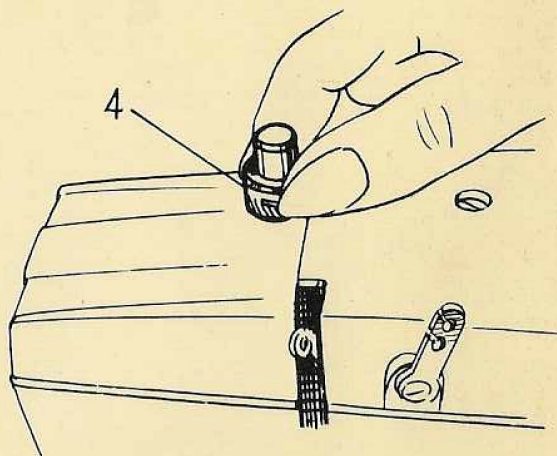
To permit the machine to stitch properly and to feed the fabric past the needle, the Presser-Foot must bear down on the fabric. The Presser-Bar-Lifter controls the raising and lowering of the Presser-Foot.

Depending on the weight of the fabric, particularly when sheer or light weight fabrics are sewn, change in the pressure of the Presser-Foot may be needed.

To reduce the pressure, place index finger of your left hand on the round base of the Darner in order to control its rise. At the same time, with the index finger of your right hand on the head of the Darner, (4) permit the head of the Darner to rise either partly or fully, depending on fabric and operation.



To increase pressure, push the top of darner.

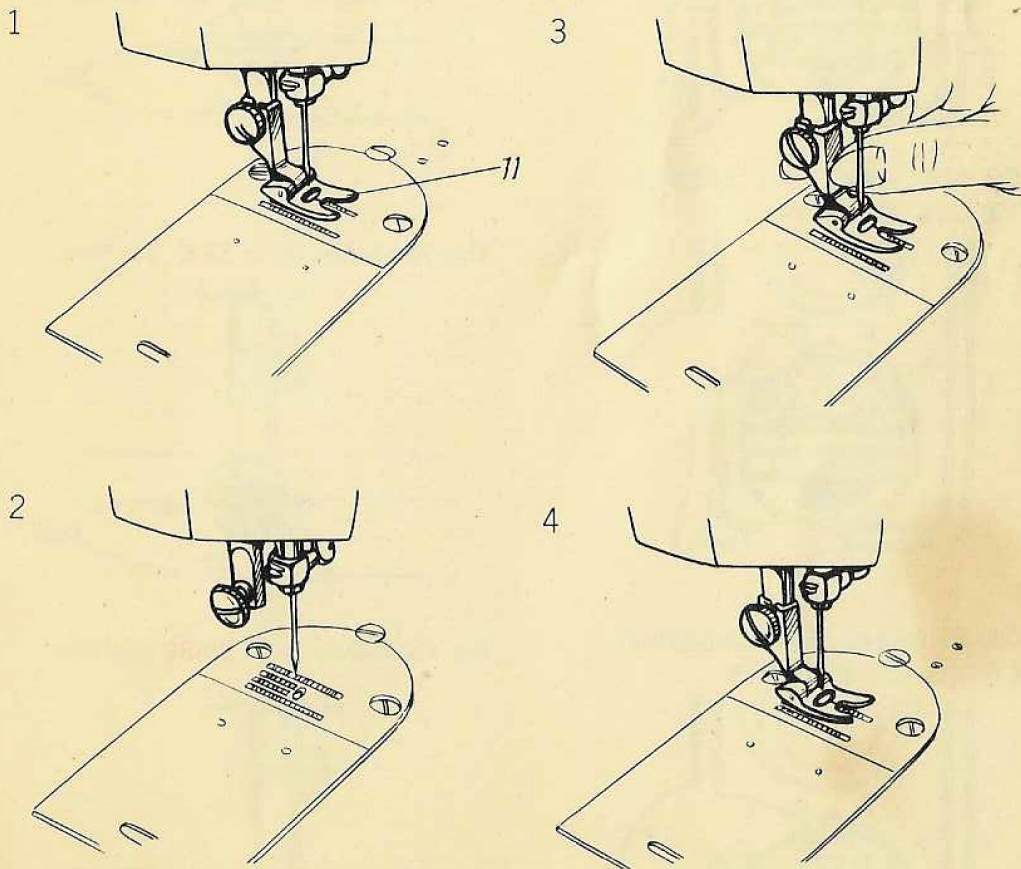


To decrease pressure, push the round base.

4. CHANGING THE PRESSER-FOOT.

Many of the machine operations require the use of the special Presser-Feet included in the accessory box.

- a) Raise the Presser-Bar-Lifter and turn the Hand-Wheel toward you to bring the needle to its highest position.
- b) Loosen the Screw about three turns.
- c) Remove the Presser-Foot. (11)
- d) Replace the Foot, following the above operations in reverse order.



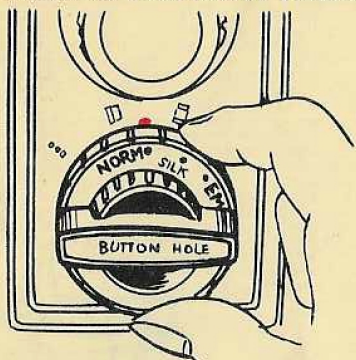
5. THREE POSITIONS OF DROP FEED.

The machine is equipped with the Dialmatic Drop-Feed.

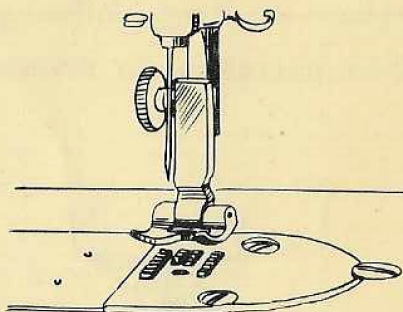
When sewing different fabrics, sewing on buttons or sewing free hand embroidery, it is best to have the proper feed adjustment.

The Dialmatic Drop Feed (16) lowers the Teeth of Feed-Dog by turning the dial, right center and or left so that the fabric does not move.

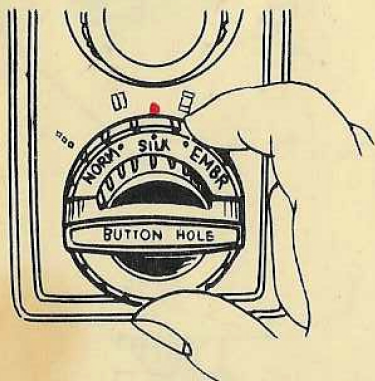
FOR STITCHING ORDINARY FABRICS.



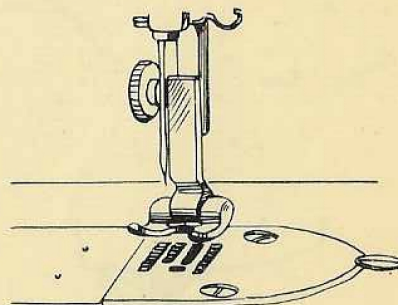
The Feed-Dog is in **NORM** position.



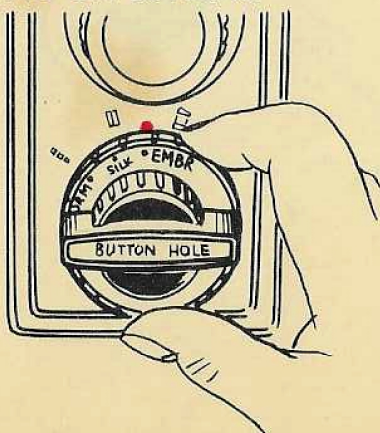
FOR STITCHING FINE FABRICS.
LIKE SILK CHIFFON.



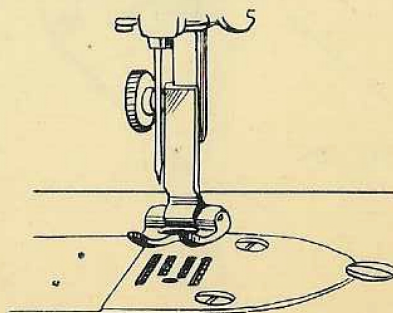
The Feed-Dog is in **SILK** position.



FOR DARNING, EMBROIDERING
SEWING ON BUTTONS.



The Feed-Dog is in **EMBR** position.



ACTUAL SEWING WORK

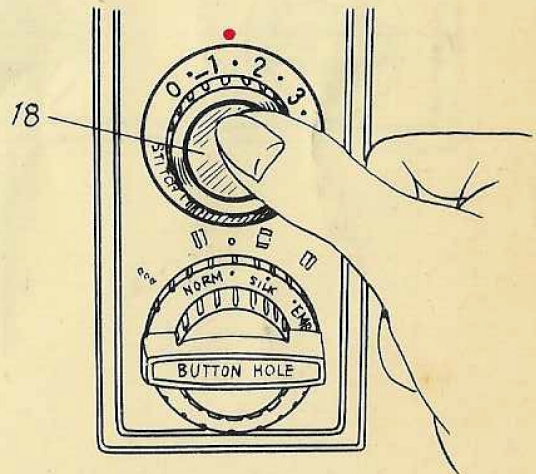
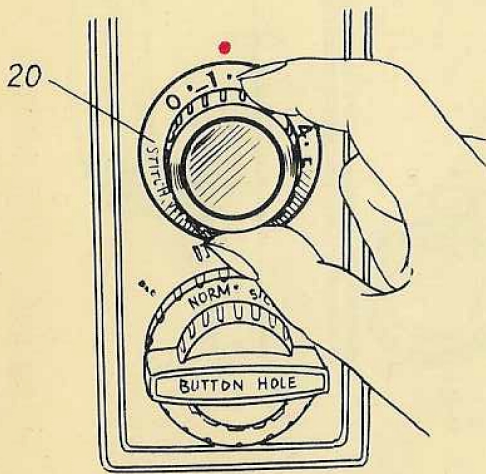
1. STITCH REGULATING AND REVERSE STITCH.

The length of stitch is regulated by the Stitch Regulator Dial (20).

Naturally, length of the stitch increases from the 0 (minimum) to 5 (maximum).

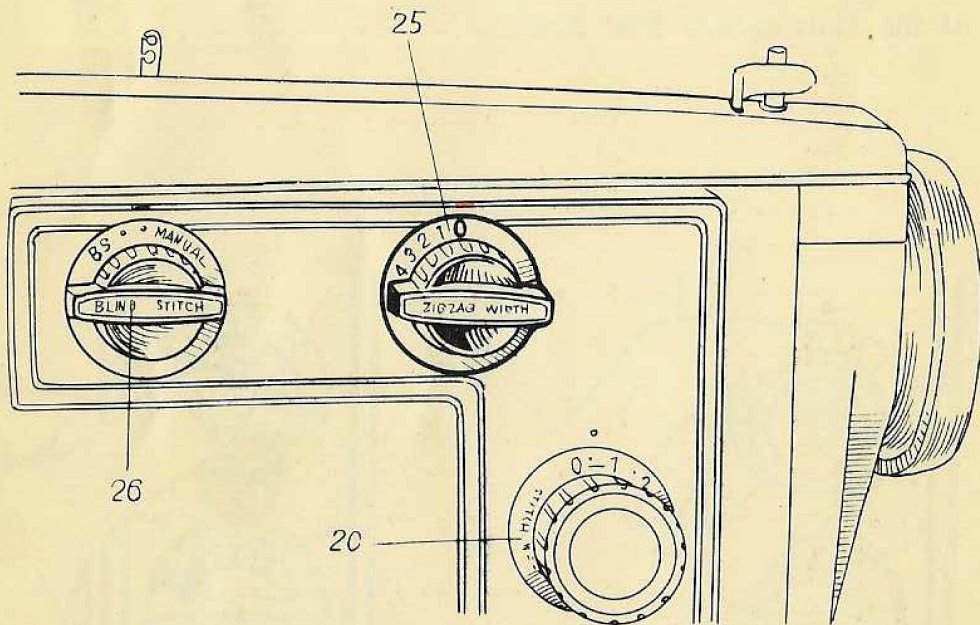
The Red Mark between 0 and 1 of the dial indicates the normal stitch length for satin stitch and automatic buttonholing.

To stitch in reverse, push the Reverse Stitch Push Button (18), in the center of the Button-hole Dial Knob.



2. STRAIGHT STITCHING

- a) Set the Zigzag Width Dial (25) at '0' position.
- b) Set the Stitch Regulator Dial (20) at desired stitch length.
- c) Be sure that the Automatic Blind Stitch Dial at "Manual" position.
- d) Start sewing.

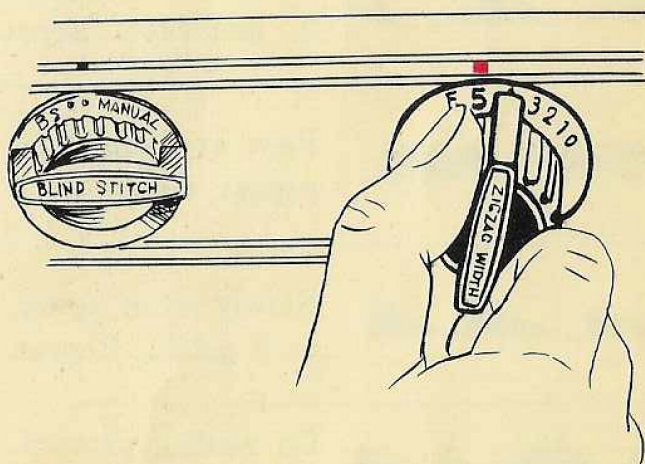
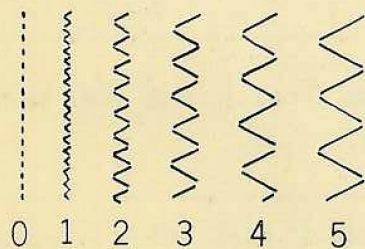
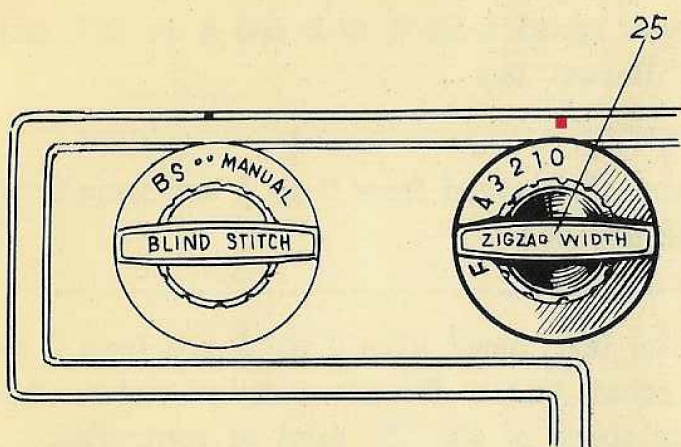


NOTE:

Regular Straight Stitch sewing can be done with the Zigzag Needle-Plate and Zigzag Presser-Foot, which are installed on machine.

3. ZIGZAG STITCHING

Zigzag Width Control Dial (25) regulates the width of zigzag stitch. By turning the Dial clockwise, you can increase the width of stitch from 1 to 5 millimeters (0 is only for straight stitch)



NOTE:

Automatic Blind Stitch Dial must be at the "Manual" position.

4. VARIOUS ZIGZAG PATTERNS

Pattern to be sewn

How to operate the zigzag-width-control-dial



At even speed from 0 to 5 and 5 to 0. Repeat this.



At even speed from 0 to 5 and 5 to 0, and rest. Repeat this.



At even slow speed from 0 to 5 and from 5 to 0. Repeat this.



At even fast speed from 0 to 5 and from 5 to 0. Repeat this. To get uniform curve, the moving speed of dial (25) must be controlled.



At even fast speed from 0 to 5 and from 5 to 0, and rest. Repeat this.



Rest at 5 and dial back to 0 quick and rest, repeat this.



Slowly even speed from 0 to 5 and dial back to 0 quick. Repeat this.



Do making pattern 1 and 4 each other, repeat this.



Set the zigzag-width-control-dial (25) at 5.

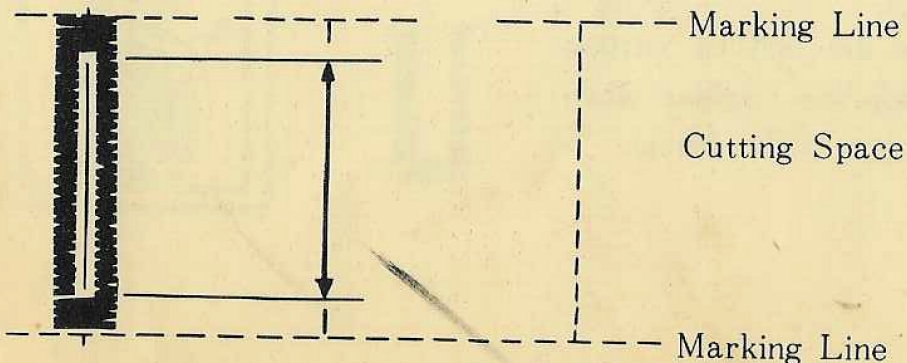
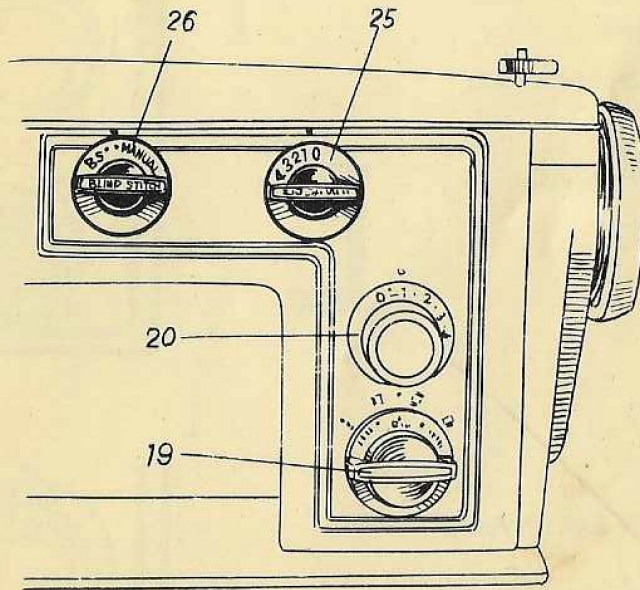


Set the zigzag-width-control-dial (25) at 3.

6. AUTOMATIC BUTTONHOLER

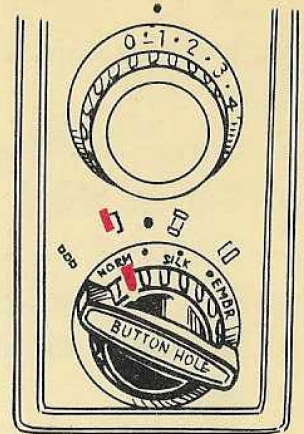
Buttonholes can be made fully automatic, by turning the Buttonhole Dial (19).

- a) Change the Regular-Presser-Foot to the Buttonhole Foot.
- b) Set the Stitch Regulator-Dial (20) at Red Mark in the middle of 'O' and '1'.
- c) Set the Zigzag-Width-Control-Dial (25) at 'O'. To increase stitch width set dial at No.1 or No.2, this in turn decrease the cutting space.
- d) Be sure that the Automatic Blind Stitch Dial at "Manual" position.



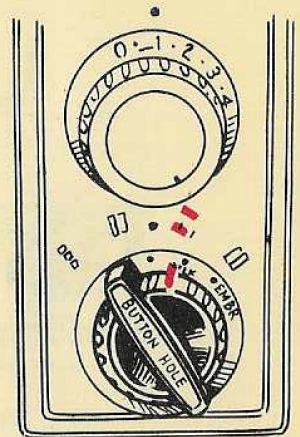
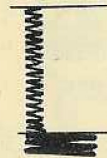
Left Side Stitching.

- a) Turn (Button Hole) Dial (19) as shown.
- b) Stitch from beginning of marking line to bottom marking line. Stop machine when the needle is out of the fabric.



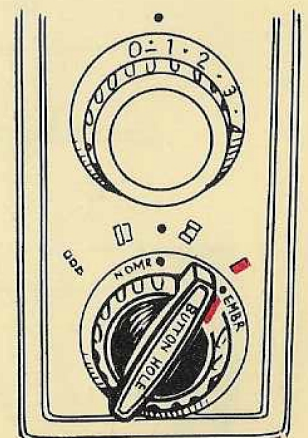
Bar Tack

- a) Turn Button Hole Dial as shown, and stitch 4 or 5 stitches.
- b) Your machine will stitch back bar tack automatically.
- c) Stop machine when the needle is out of fabric.



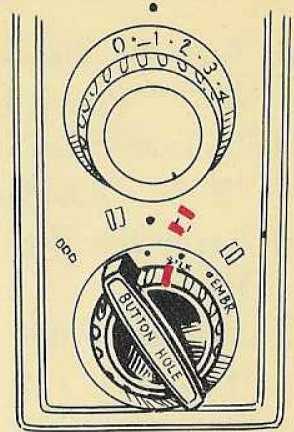
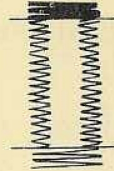
Right Side Stitching.

- a) Turn Button Hole Dial as shown, and start stitching.
- b) Your machine will stitch in reverse automatically.
- c) Stitch up to the end of cutting space, and stop the machine when the needle is out of the fabric.

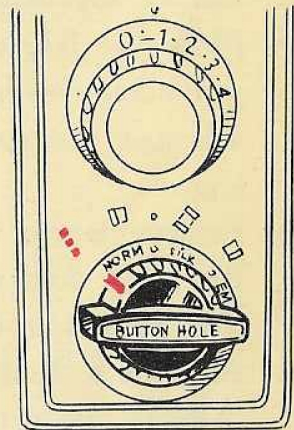


Crossing Bar Tack

- Turn Button Hole Dial as shown, and stitch 4 or 5 stitches.
- Your machine will stitch back bar tack automatically.

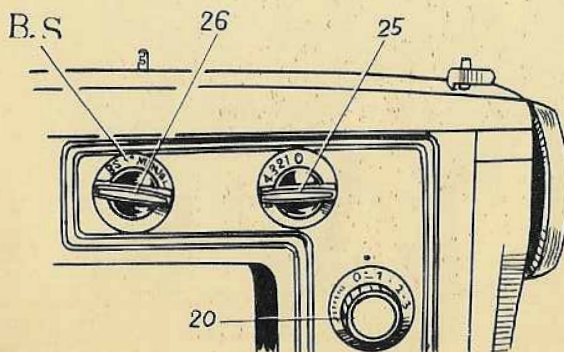
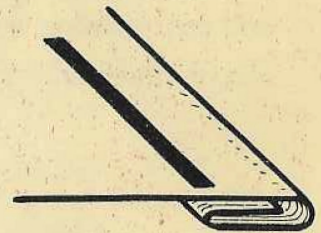
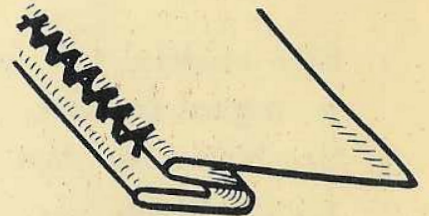
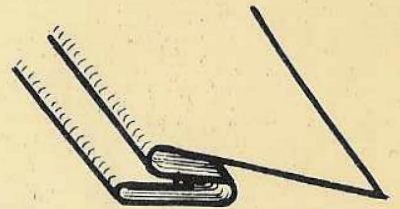
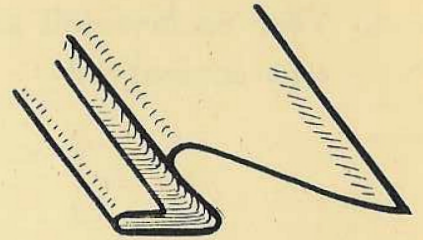


- Stop machine and turn Dial back to original position.
- Stitch two or four stitches for reinforcement.
- Remove fabric from the machine and cut opening with seam ripper or sharp embroidery scissors.



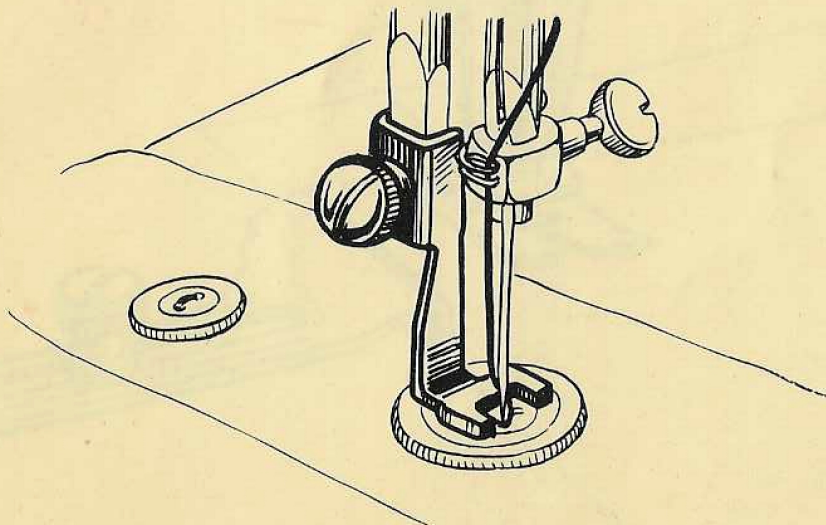
6. AUTOMATIC BLIND STITCH

- a) Turn the Zig-Zag Width Control Dial (25) to "F" Position.
- b) Turn the Blind Stitch Dial Knob (26) to "B. S." Position.
- c) Reset the Zig Zag Dial Knob to "O" Position.
- d) Set the Stitch Regulator Dial (20) at 0 to 1.
- e) Fold the fabric as shown.
- f) The lower fold should overlap the upper fold by approximately 1/16 of an inch.
- g) Place the fabric under the Presser Foot, and start sewing on lower fold. Machine will sew the upper fold automatically as shown.
- h) Remove fabric from machine and fold back the upper fold as shown.
- i) For releasing the automatic blind stitch reset the Blind Stich Dial Knob to "Manual" position by turning the Zig Zag Width Control Dial to "F" position and then to "0" position.
- j) The Built in Automatic Blind Stitch works from right to left sides so that it is unnecessary that you turn the cloth in overlapping.



7. SEWING ON BUTTONS

- a) Replace the Regular-Presser-Foot with the Sew-on Button-Foot.
- b) Turn the Dialmatic Drop-Feed (16) to have the Feed dog in Down Position.
- c) Place the fabric or garment and the button under Sew-on Button-Foot and lower the Foot to hold the fabric and button securely.
- d) Be careful to position the button so needle will enter left hole and then right hole, according to the next operation. Be sure that the holes line up with the oblong hole in the Sew-on Button-Foot.
- e) Set the Zigzag-Width-Control Dial (25) by dialing clockwise while turning the Hand-Wheel, so the Needle enters the right hole in the button.
- f) Make one stitch in each hole in button, just to be certain that the needle will not hit the solid portions. Then sew five or six stitches to attach the button.
- g) Turn the Zigzag-Width-Control Dial (25) back to point "O", and stitch two or three times through the same hole for reinforcement.
- h) Remove the garment from machine and snip the thread.



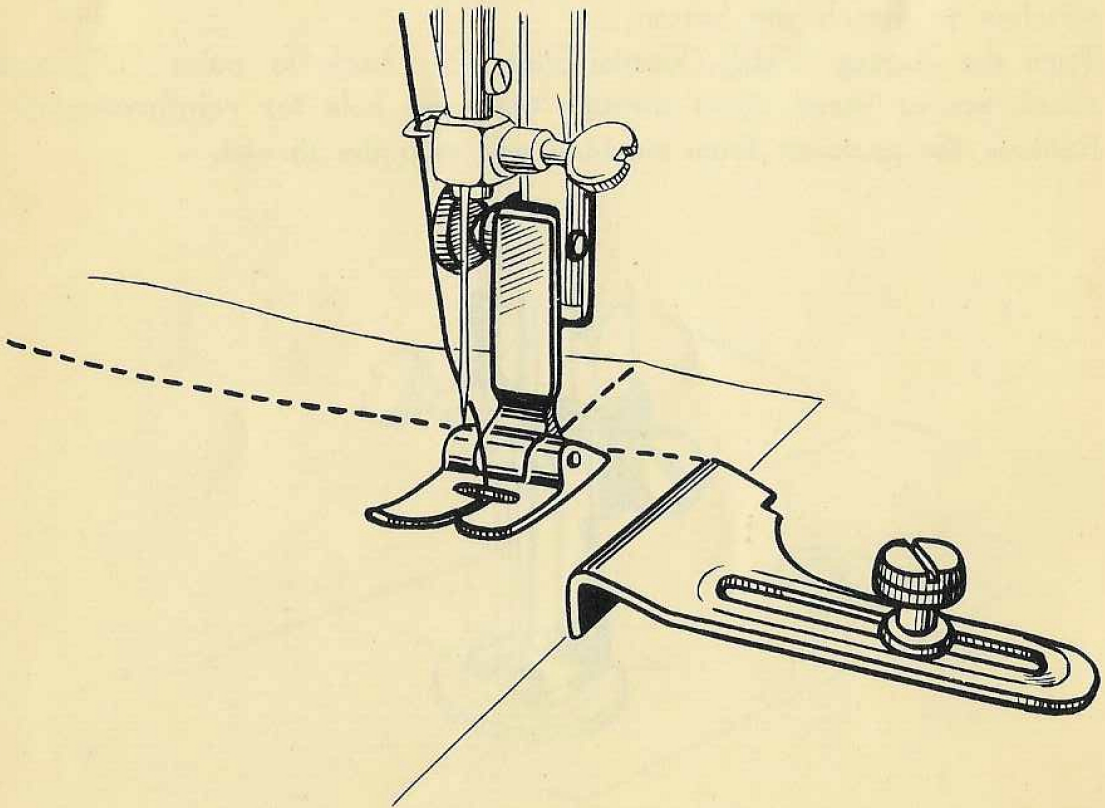
NOTE:

When attaching four-hole buttons, first sew one set of two holes, then stitch into second set of two holes and stitch two or three times in the last hole, same as described above.

8. CLOTH GUIDE OPERATION

This attachment will help you guide the material accurately, while sewing close to the edge of the fabric.

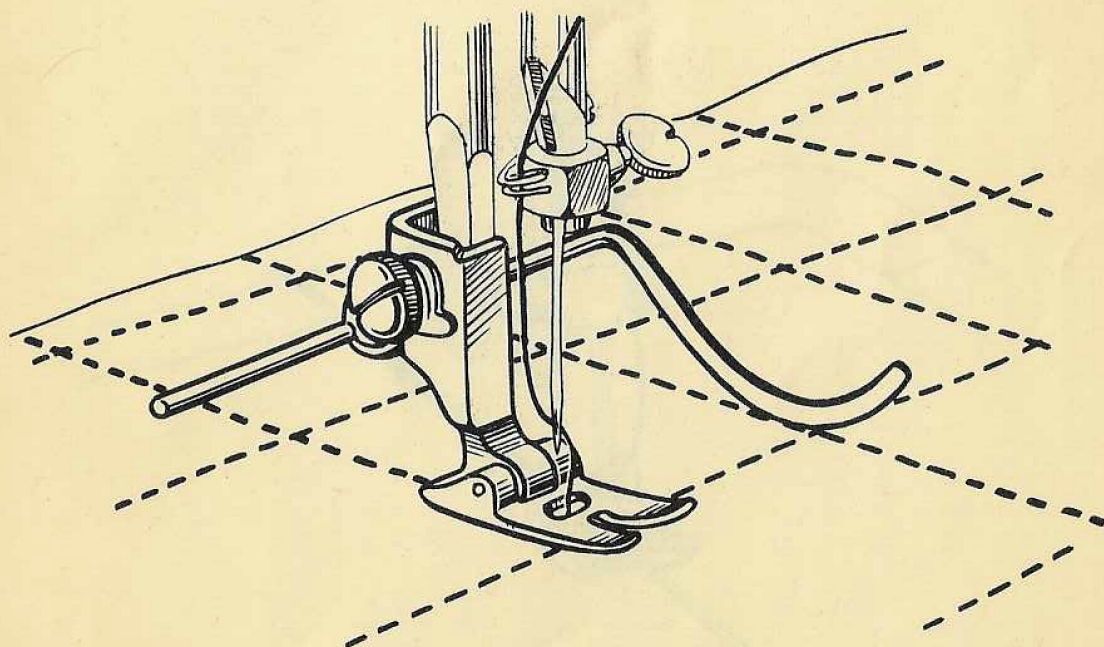
- a) Fasten the Cloth-Guide to the bed of the machine by means of the Thumb-Screw, inserting the Thumb Screw into either one of the two screw holes in the bed of the machine.
- b) Adjust the Guide to required distance from the needle and tighten Thumb Screw.



9. QUILTING GUIDE

The Quilting Guide will enable you to stitch rows automatically at the desired distance on padded fabrics. No marking is necessary.

- a) Loosen the Thumb Screw and insert the Prongs of the Guide between the Thumb Screw and the Presser Foot.
- b) Tighten the Thumb screw securely.
- c) Slide the Guide at the distance you wish to maintain your rows of stitching.
- d) Stitch first row.
- e) Place the Guide on the first row of stitching so that the second row will have the desired distance from the first.
- f) Continue stitching rows in same manner.

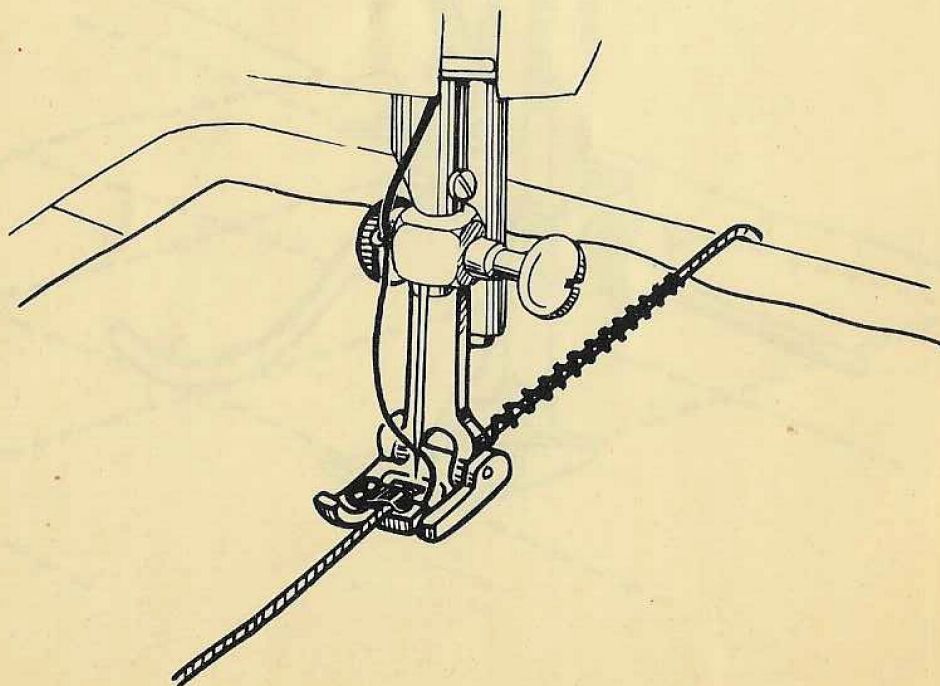


10. CORDING FOOT

- a) Replace the Regular Presser Foot with the Cording Foot.
- b) Be sure that the Automatic Blind Stitch Dial (26) at "Manual" position.
- c) Pass the braid (cord or gimp) under the spring on front of the foot.
- d) Adjust the Zigzag-Width-Control Dial (25) and the Stitch-Regulator-Dial (20) to obtain the desired width and length of stitch to cover the braid.
- e) Start slowly, using extreme care in following design until you have become accustomed to guiding the fabric.

NOTE:

Using needle thread of a contrasting color will enhance the beauty of your braiding.



11. HEMMER

If you use this Hemmer Foot carefully, hemming becomes simple and easy.

The spiral formed tongue or scroll of the foot turns in the edge of the fabric and forms the hem.

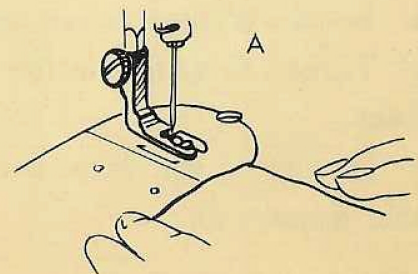
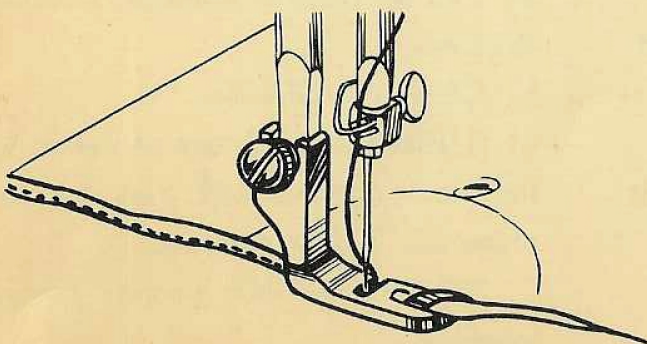
- a) Replace the Regular Presser Foot with Hemmer Foot.
- b) Be sure that the Automatic Blind Stitch Dial (26) at "Manual" position.
- c) Fold the edge of the fabric over approximately $1/8$ of an inch, then fold it over again in the same way for a length of about 2 inches.
- d) Place the needle and bobbin threads under the hemmer foot.
- e) Insert the fold into the spiral formed opening (scroll) of the Hemmer Foot. Move the fabric slightly back and forth until the fold forms scrolled shape.
- f) Draw the fabric toward you until the start of the hem edge is just below the needle.
- e) Lower the Hemmer Foot and begin to sew. Guide the fabric into the Hemmer Foot while sewing.

NOTE :

Don't push or pull the fabric. Even feeding is essential for good hemming.

The fabric must be kept at the same width in the scroll of the Hemmer Foot at all times.

Prior to folding the edge of the fabric, cut the edge of the fabric as shown in Fig. A. You can easily insert the fabric to the scroll of hemmer.



HELPFUL HINTS

REASONS

CORRECTIONS

WHEN THE SHUTTLE-HOOK BECOMES JAMMED.

It occasionally happens that loose threads become entangled and impede the free movement of the Shuttle-Race.

- a) Remove the Bobbin-Case.
- b) Push the Pins sideways.
- c) Remove the Shuttle-Race-Cap from the Shuttle.
- d) Remove the Shuttle-Hook, and brush off all thread, lint, etc.
- e) Insert the Shuttle-Hook, and the Shuttle Race-Cap which is inserted in its slot to pin of Shuttle.
- f) Push the Pins back to their original position.

WHEN THE MACHINE RUNS HEAVILY

If the machine runs sluggishly after standing idle for some time, apply a drop of benzine in place of oil.

Run the machine rapidly to clean.

Then oil the machine.

WHEN THE MACHINE RUNS HEAVILY FOR OTHER REASONS.

The motor belt is too tight, or has jumped off the Pulley or Hand-Wheel.

- a) Bobbin-Winder is not released.
- b) Thread is caught in the Shuttle-Race.
- c) Machine is lubricated with unsuitable gummy oil.

Loosen belt by adjusting the motor bracket.

- a) Pull up release latch of Bobbin-Winder.
- b) Clean the Shuttle.
- c) (1) Place a few drops of kerosene into each oil hole and run the machine for a few minutes.
(2) Lubricate with proper sewing machine oil.

REASONS

CORRECTIONS

MAKES LOOSE STITCHES AND LOOPS ON UNDERSIDE OF FABRIC.

- | | |
|---|--|
| a) Threading is incorrect | a) Correctly thread machine. (See Chap. 6 of Basic Information). |
| b) Presser-Foot is not completely lowered. | b) Check whether Presser-Foot is down. If not, adjust the presser bar guide bracket, also check position of Darning. |
| c) Insufficient tension of needle thread. | c) Adjust thread tension. (See Chap. 2 of Actual Sewing.) |
| d) Thread take up spring is bent or broken. | d) Change the spring. |
| e) Poor stitches and bad seams for following reasons : | e) |
| 1. The bobbin is wound unevenly. | 1. Adjust the tension guide. (See Chap. 2 of Basic Information.) |
| 2. Upper thread tension is too tight or too loose. | 2. Adjust the upper thread tension. (See Chap. 2 of Actual Sewing.) |
| 3. Bobbin thread is too coarse for material. | 3. Use thread of same size as the needle thread. |
| 4. The needle is not suited for material. | 4. Use finer needle and thread which is suitable for the fabric. |
| 5. Needle damaged. | 5. Change the needle. (See Chap. 5 of Basic Information.) |
| 6. Uneven thread tension likely to be caused by thread of poor quality. | 6. Change the thread. |

IF THE MATERIAL PUCKERS

- | | |
|---|--|
| a) The needle thread tension is too tight. | a) Loosen the tension. (See Chap. 2 of Actual Sewing.) |
| b) The needle and the bobbin thread are too tight for the fabric. | b) Loosen both tensions. (See Chap. 2 of Actual Sewing.) |
| c) Too much pressure applied to the presser foot. | c) Release the pressure of presser foot and adjust. |

IF THE MACHINE JAMS OR CLOGS.

- | | |
|--|--|
| a) The machine is not properly threaded. | a) Correct the threading as in Chap. 6 of Basic Information. |
|--|--|

REASONS

- b) Running machine without fabric.
- c) Sewing with the stitch regulator dial at 'O'.

IF THE MACHINE DOES NOT FEED PROPERLY.

- a) The stitch regulator dial is at 'O'.
- b) The feed dog is dropped.
- c) Insufficient pressure is applied to the presser foot.

IF THE BOBBIN DOES NOT WIND PROPERLY.

- a) The machine is not threaded correctly.
- b) The thread is out of the tension discs.

IF THE NEEDLE THREAD BREAKS.

- a) The needle is inserted incorrectly.
- b) The needle is not threaded correctly.
- c) The upper tension is too tight.
- d) Knots in thread.
- e) The needle is too fine for thread.
- f) The needle is bent or its point is broken.
- g) The stitch hole in the needle plate is rough or sharp.
- h) Poor quality thread.

CORRECTIONS

- b) Do not operate the machine without fabric. Clean the shuttle race. See "When the shuttle hook becomes jammed" under "Helpful Hints".
- c) Do not run the machine in position 'O'.

- a) Do not set the dial at 'O' position.
- b) Raise the feed mechanism by pushing the right hand button of Drop Feed completely.
- c) Increase the pressure by pushing the head of the darning.

- a) Correct the threading as in Chap. 2 of Basic Information.
- b) Check thread to the tension discs.

- a) Correct the insertion of needle as in Chap. 5 of Basic Information.
- b) The needle must be threaded from left to right through needle hole.
- c) Loosen the tension as in Chap. 2 of Actual Sewing.
- d) Use better quality thread.
- e) Change to larger size needle.
- f) Change needle.
- g) Polish stitch hole or replace needle plate.
- h) Change thread.

REASONS

CORRECTIONS

IF THE MACHINE STOPS WHILE SEWING.

The stop motion knob has not been tightened sufficiently.

IF THE MACHINE SKIPS STITCHES.

- | | |
|--|--|
| a) The needle is inserted incorrectly. | a) Correct the insertion of needle as in Chap. 5 of Basic Information. |
| b) The needle is bent or blunt. | b) Change needle. |
| c) The needle is threaded improperly. | c) It must be threaded as in Chap. 6 of Basic Information. |
| d) Wrong size of needle is used. | d) Change size of needle. |
| e) Thread is too heavy for needle. | e) Change needle to a heavier one. |
| f) The pressure of presser foot is insufficient especially when sewing heavy material. | f) Check pressure. |

IF THE NEEDLE BREAKS

- | | |
|---|---|
| a) The needle is bent. | a) Change to new needle. |
| b) The fabric is pulled from behind while sewing. | b) Do not interfere with feeding action of machine. |

NOTE :

To avoid breaking of needle, tighten thumb screw of needle clamp.

Do not sew heavy seams or very thick fabric with fine needle.

Heavy needle and thread should be used on heavy fabric.

Refer to the list of needle and thread sizes.



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